



Forest Insect & Disease Management

Report No. 80-3-21

Issued on: 6-4-80

AERIAL DETECTION SURVEY OF FOREST INSECT AND DISEASE ACTIVITY, MAMMOTH CAVE NATIONAL PARK

LAND OWNERSHIP OR SURVEY AREA: **Mammoth Cave National Park**
U.S. Department of the Interior

STATE: **Kentucky**

AREA WITHIN SURVEY BOUNDARY: 51,311 acres

DATE: May 30, 1980

PERCENT COVERAGE: 50%

AIRCRAFT: Aero Commander 680

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SURVEY OBJECTIVES

To locate and quantify defoliation of hardwood species in the survey area.

SURVEY RESULTS

An aerial survey was conducted on 5/30/80 over Mammoth Cave National Park. Defoliation was not readily evident from the air. Individual hardwoods were observed which had been defoliated, but unlike a typical pattern of defoliation, these trees did not occur in groups but rather were scattered throughout the survey area. Because of the limited amount of defoliation and the lack of severity, it was impossible to quantify the damage.

Ground checks in the survey area indicate that several insects are responsible for the defoliation. Spring cankerworm (Paleacrita vernata (Peck)), Linden looper (Erannis tiliaria (Harr.)), and the Phigalid looper (Phigalia titea (Cram.)), were positively identified and several other species were collected and are currently being identified.

CONCLUSIONS

Defoliation of hardwood species has been noted throughout the survey area since 1977. The amount and severity of defoliation are considerably less than in preceding years. While spring defoliators are often abundant, their impact on tree growth is minimal and usually no hardwood mortality results. High populations of these insects can become a major nuisance in shade trees and other high value areas such as campgrounds and picnic facilities. The frass which these insects excrete and the silken strands which they produce can become annoying to the public, not to mention the abundance of the caterpillars. Populations of these insects are usually held in check by natural control agents (rodents, carnivorous and parasitic insects, as well as viruses) through predation and parasitism, therefore no control measures are usually necessary. Field surveillance by National Park personnel should continue to aid in the early detection of potential insect and disease problems.

For additional information, contact:

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